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ABSTRACT

This paper reports on the effectiveness of Australian schools in preparing young people for the workplace with particular emphasis on literacy and numeracy. Section 1 summarizes the contents. Section 2 notes current interest in assessing school effectiveness. The issue of standards of literacy and numeracy is then considered. Reference is made to interpretational and technical problems in monitoring standards, and the case is argued for more valid measures of student achievement and increased role by the Education Department in supporting school assessment of achievement and in monitoring standards. An employer perspective of school effectiveness makes detailed reference to a research study of employer expectations and perceptions of school leavers. Section 3 describes some school arrangements and initiatives in educating for literacy and numeracy, orienting students toward the world of work, and teacher education. Section 4 concludes that despite greater emphasis on literacy, numeracy, and vocational preparation, schools will have to be increasingly more effective in meeting demands of a rapidly changing society. Four focuses for further action are proposed: evaluation and implementation of new ideas; curriculum development; improved supervision, monitoring, and reporting of pupil progress; and emphasis in teacher education on teaching literacy and numeracy. (YLB)

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Discussion Paper No. 8

PREPARING YOUNG PEOPLE FOR THE WORK-FORCE: THE PLACE OF LITERACY AND NUMERACY

Submission from the Education Department of Western Australia to the Senate Standing Committee on Education and the Arts.

EDUCATION DEPARTMENT OF WESTERN AUSTRALIA

February, 1980

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FOREWORD

At the present time, there is much public interest in the effectiveness of our schools in preparing students for the work-force and in providing them with the basic skills of literacy and numeracy required by employers and necessary for self-development and full participation in the broader life of the community.

Recently, the Education Department was invited to make a submission to the committee established by the Senate Standing Committee on Education and the Arts to investigate and report on:

> The effectiveness of Australian schools in preparing young people for the work-force, with particular emphasis on literacy and numeracy.

To enable discussion of this important subject to be better informed and to outline Departmental policies and initiatives in the area, I have arranged for the Department's submission to be published as a discussion paper.

The submission was written by Mr P. Hill, an education officer of the Research Branch, in consultation with a Departmental committee comprising Dr N. Hoffman, Relieving Director of Educational Services (chairman); Superintendents Mr M. Angus (Research), Mr K. Catterall (Guidance), Mr P. Gunning (English), Mr R. McCreddin (Mathematics), Mr P. Miller (Manual Arts), Mr G. Peate (Technical) and Mr G. Winnett (Secondary); Dr A. Ryan (W.A.I.T.) and Mr B. Scott (Confederation of Western Australian Industry).

D. Mossenson

DIRECTOR-GENERAL OF EDUCATION

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1. INTRODUCTION

1.1. Preamble

This statement has been prepared for submission to the committee established by the Senate Standing Committee on Education and the Arts to investigate and report on:

> The effectiveness of Australian schools in preparing young people for the work-force, with particular emphasis on literacy and numeracy.

The statement has taken advantage of the perceptions of superintendents and other officers of the Education Department and of the representative of the Confederation of Western Australian Industry. It thus broadly reflects the views of educators and employers in Western Australia.

For the purpose of this submission, it has been assumed that the terms of reference of the Committee refer principally to

(i) the period of compulsory schooling, which in Western Australia extends from ages 6 to 15 years; and

(ii) the effectiveness of educational provision for those proceeding directly from school to the work-force.

Education is, of course, a constitutional responsibility of the States and the Western Australian Education Department has built up considerable expertise in the literacy and numeracy area.

1.2 Summary of submission

The statement begins in Section Two by noting the degree of interest currently evident in assessing the effectiveness of schools and some of the more unfortunate characteristics of this debate. The issue of standards of literacy and numeracy is then considered. Reference is made to interpretational and technical problems in monitoring standards, and caution is advocated in any future national monitoring exercise. In addition, the case is argued for more valid measures of student achievement and for an increased role by the Education Department in supporting school assessment of achievement and in monitoring standards.

In presenting an employer perspective of the effectiveness of schools, fairly detailed reference is made to a major research study carried out jointly by the University of Western Australia and the Education Department of Western Australia, which explored employer expectations and perceptions of school leavers.

The third section describes some of the more important arrangements and initiatives currently under way in the Department's schools in the areas of educating for literacy and numeracy and in orienting students towards the world of work.

The fourth section draws together the evidence considered thus far and concludes that, within Western Australia, educators have responded quickly and responsibly to public demands for a greater emphasis on literacy and numeracy and vocational preparation; but, notwithstanding the increased attention

to these areas, schools could become more effective and will in any case have to be increasingly more adaptive in meeting the demands of a rapidly changing society. To this end, four foci for further action are proposed, namely:

(i) the evaluation, dissemination and systematization of new ideas and initiatives;

(ii) continuing dialogue on the role of literacy and numeracy and of career education in the curriculum;

(iii) improved supervision, monitoring and reporting of pupil learning; and

(iv) greater attention to the education of teachers, especially their preparation for teaching literacy and numeracy.

Finally, it is stressed that the Education Department does not believe that there are any quick and simple ways of improving the effectiveness of schools. Rather, it believes that long-term gains are likely to be achieved as the result of continuing efforts on a fairly broad front, and in a direction which has the general endorsement and support of a wide spectrum of community interests.

2. ASSESSING THE EFFECTIVENESS OF SCHOOLS

2.1 The public debate

In recent times, public interest in education has tended to focus upon the question of the effectiveness of schools in preparing students for the adult world of work and in providing them with the basic skills of literacy and numeracy required by employers and necessary for full participation in the broader life of the community. Widespread media reporting of the issue would indicate a considerable and growing consensus view that standards in the basic skills of reading, writing, spelling and mathematics have fallen and that students are leaving school poorly equipped to enter the work-force. Educators have responded by claiming that no decline has occurred and have countered that schools are being unfairly made the scapegoats of certain of society's more pressing social and economic problems.

Unfortunately, much of the debate has been ill-informed, superficial and misdirected. In addition, it has led to several proposals for attractively quick and easy 'solutions' which may be politically expedient but which in terms of the problem are over-simplistic and fail to come to grips with the real issues.

2.2 Standards of literacy and numeracy

2.2.1 Surveys of standards

In particular, much time and effort have been devoted to discussing the alleged decline in standards of literacy and numeracy. While much of the debate

has relied heavily upon subjective accounts, there have also been several reviews of the relevant empirical evidence relating to the question. Within Australia, that by Skilbeck is perhaps the most comprehensive.[1] For Western Australia, the five-year surveys of primary school achievement carried out between 1955 and 1970[2] are a primary source of evidence.

Those who have attempted to resolve the standards debate by analysing survey test-score data have found their efforts beset by technical and interpretational problems. The evidence has been inconclusive in the extreme and can only lead to a highly sceptical attitude towards any claims for either a rise or decline in standards of literacy and numeracy.

Given the well-documented problems associated with previous surveys of achievement, it is disturbing to note the extent to which pressure has been brought to bear in certain overseas countries and within Australia to repeat such exercises and on a larger scale than ever before.

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1 Skilbeck, M., Beyond the Standards Debate, Education News, 16(3) 1977, 8-11.

2 Angus, M.J., The Western Australian Surveys of Primary School Achievement 1955-1970, Perth: Education Department of Western Australia, 1976.

With regard to the recently announced decision to proceed with national monitoring of standards, the Education Department is appreciative of the factors which led to this decision, but would not wish to minimize the considerable problems associated with such an exercise. Clearly, this is something which calls for sensitive handling and careful supervision and which the various education systems will need to monitor closely.

2.2.2 The standards debate

Ultimately, the question as to whether standards of literacy and numeracy are rising or falling is perhaps not the question that needs to be asked, though it is important to inquire why it is so persistently asked. The following are offered as likely explanations:

(i) The standards issue continues to be a debatable issue, not so much because of conflicting evidence, but because of conflicting opinions within society as to what schools are for and how they are to set about their task. We live in a pluralistic society which is deeply divided on the question of standards, but which has increasingly turned to schools to absorb functions formerly undertaken by institutions such as the family, the Church and other voluntary groups. Furthermore, we live in a society in which standards change over time and in different contexts. Thus, the standards of one generation may not be the standards of another, and the standards which apply in one situation may be regarded as inappropriate

in another situation. As a consequence, schools can easily find themselves at odds with pupil peer-group values, the values of the home, or the standards of the popular media, to name but a few.

(ii) It has been difficult to settle the standards debate because of the communication gap between the language of the educators and of the public, and between the school and the home. Like so many fields, education has changed a great deal since employers and the parents of today's generation of school children were themselves at school. As a consequence, they have found it difficult to understand reports which show grades rather than percentages. They have not understood the 'new mathematics'. They have been suspicious of programmes which have placed little emphasis on drill and have stressed experiential and discovery learning. They have been quick to attribute any failings of the schools to progressive methods, and to call for a return to the kind of education they themselves experienced with its more exclusive emphasis on the 3 R s.

(iii) Then there have been changes in the nature of work itself. In particular, the decrease in the proportion of manual occupations and the corresponding increase in the proportion of jobs requiring a minimum level of competence in the skills of literacy and numeracy have highlighted the standards question. Evidence regarding the decline in the proportion of unskilled

occupations and the rise in the proportion of jobs requiring a moderately high degree of literacy and numeracy have been summarized by the Schools Commission in its Report for the Triennium 1976-79 and by the Committee of Enquiry into Education and Training (vol. 2, p. 291).

(iv) Finally, factors such as the increased numbers of pupils attending school, both before and beyond the compulsory period, and changing demographic patterns, especially the general growth in the student population and in the numbers of children from non-English speaking migrant families, have complicated the standards debate and led to unfavourable comparisons of essentially non-equivalent groups over time. For example, in W.A. Government high schools, retention rates from Year 9 to 10 rose from 48% in 1950 to 93% in 1978, and from Year 10 to 11 from 19% in 1950 to 54% in 1978.

2.2.3 Validity of measures used to monitor standards

One of the chief criticisms currently levelled at previous attempts to measure standards and to provide evidence of the effectiveness of schools is that they have employed, as criterion measures, standardized achievement tests. Because such tests have not been geared to local curricula, they have lacked validity and sensitivity when used to evaluate the impact of specific educational programmes. This curriculum – test

mismatch has been a particularly noticeable feature of both national-and State-administered surveys within Western Australia in recent times, and it is evident that it constitutes one of the major deficiencies to be overcome in future monitoring of educational standards in this State. The problem has been exacerbated of late by such diametrically opposed tendencies as the growth of school-based curriculum development and evaluation on the one hand, and the initiation of national curriculum-development projects and attempts to survey achievement of a core of 'essential' learnings on the other hand.

2.2.4 The role of the Education Department

Clearly, there is a need to maintain a careful balance between the extremes of total school autonomy and rigid national conformity; and, in this regard, the Education Department of Western Australia believes that it has a key role to play in providing support to schools through the development of curriculum guidelines and evaluation materials. In the area of curriculum development much has already been achieved; but, for a variety of reasons, proportionately less has been done to provide syllabus-related testing and assessment materials for use at the classroom and school levels. However, a number of important local initiatives are now under way to redress this imbalance and to assist teachers in schools in the important task of monitoring the learning process.

2.3 Employer perspectives on the effectiveness of schools

Test results are but one source of information regarding the effectiveness of schools. Another important source is the attitudes of relevant groups within society. In terms of evaluating the effectiveness of schools in preparing young people for the work-force, the opinions of employers are clearly pertinent. Unfortunately, little empirical evidence is available on this subject within Australia, since there have been few attempts to conduct large-scale surveys of employers' opinions of school leavers and their readiness for work.

To obtain such information, a major research study was recently carried out jointly by the University of Western Australia and the Education Department of Western Australia. (A copy of the full report formed Attachment 1 in the original submission.)

The study was an exploratory survey of one aspect of the school-work interface, namely employer expectations and perceptions of school leavers. Specifically, the aim was to survey a sample of employers in the Perth metropolitan area, using questionnaires and interviews, to ascertain:

(1) Employer expectations of school leavers entering employment.

(2) Employer perceptions of school leaver applicants and of young people in employment.

(3) Employer opinions of the adequacy of some aspects of schooling.

(4) Employer opinions of desirable changes in some aspects of schooling to better equip young people for employment.

A mailed questionnaire was used to obtain the views of employers in medium-to-large enterprises. The sample was selected to be representative of the major areas of the work-force employing school leavers and included Government (Commonwealth, State and local) and private enterprises. A total of 284 questionnaires were completed and returned, a response of 74 percent. Employers in smaller enterprises were interviewed personally. More than 70 interviews were carried out in two major suburban centres, mostly covering small shops and businesses.

The study found that there were notable differences in recruitment procedures and practices between private and Government employers and between large and small enterprises. Private employers and those in small businesses were more likely to carry out their own recruitment of staff and to rely on a personal interview only as the main method of selection of school leaver applicants. Government and larger enterprises were more likely to use additional information from general aptitude tests and/or specific entry tests. Similar differences were noted in the facilities available for the training and counselling of young people in employment, with the larger private enterprises and the Government enterprises more likely to employ personnel and training officers and to offer planned training programmes.

Employers were asked to list the overall qualities sought in school-leaver applicants. The personal quality of greatest overall significance was a 'positive, willing attitude'. Factors considered by employers when interviewing applicants included appearance (dress, cleanliness, neatness) and manner (the general impression created, including aspects such as confidence, stability, common sense and maturity). Other personal qualities rated as very important were a sense of responsibility; respect for authority; loyality to the employer; punctuality; diligence; the ability to work with and be considerate of others; initiative; and the ability to work without supervision. In terms of educational attainment, employers expected school leavers to have attained a satisfactory level of secondary education with a good grounding in the basic skills of literacy and numeracy and the ability to communicate.

A small percentage of employers, particularly those in Government enterprises, were concerned with such aspects of aptitude and potential in school-leaver applicants as the ability to handle responsibility, to pursue higher studies, and to progress to higher levels within the enterprise. With the exception of skills required for office positions (mainly for girls), employers did not expect school leavers to have specific pre-vocational training. However, they did stress the need for young people to have acquired some understanding of the nature and operation of industry and an appreciation of what will be expected of them on taking up employment.

When employers were asked to list the main areas of improvement needed by school leaver applicants, the most frequently mentioned area was again 'attitude', which was noted by 42 percent of the employers surveyed. The emphasis here was on a positive approach to work and included qualities such as enthusiasm, application, industriousness, self-discipline, motivation, and respect and courtesy towards others. Improvement in the personal appearance and manner of young people was also sought.

With regard to educational attainment, 38 percent of the employers surveyed considered *general verbal skills* as a major area of improvement needed by school leavers. This related mainly to standards of literacy and in particular to written communication, including spelling, handwriting, reading and following instructions. Twenty-two percent of the employers considered that improvement was needed in the area of 'general number skills' with criticism of the increasing use of calculators in schools. Private employers, in particular, commented on the inability of many young people to perform simple arithmetic calculations. As one stated, 'To put it simply - while they are preoccupied in trying to work out 7 x 7, they are unable to grasp the things you are trying to teach them in relation to the job'.

Employers were asked to rate school leavers of today compared with those of about five years ago in terms of general literacy, numeracy, attitude to the job, and other job-related skills. The study found that the two areas in which school leavers were seen to have changed least in the last five years

were in standards of numeracy and other job-related skills. Standards of literacy and general attitude to the job were rated as worse or significantly worse than five years ago by more than 50 percent of the employers. No clear reasons were put forward for the decline in standards, though many felt that there is currently too much tendency in schools to 'let the child do his own thing' and not enough emphasis on achieving a high level of competency in written and verbal skills.

Employers were asked to list the major advantages and disadvantages of employing school leavers. The major advantage, noted by 45 percent of the employers, was the ability to 'train young people to the company mould'. In other words, young people enter the work-force with few preconceived ideas about how a job should be performed and thus are more ready to accept guidelines and follow established procedures. Only a small percentage of the employers mentioned other advantages. These were the lower wages paid to young people, and the enthusiastic approach of some young people. The most frequently mentioned disadvantage was lack of experience. The other disadvantages noted were the attitudes of young people, and the cost and time required to train them to be productive workers. However, 11 percent of the employers specifically stated that there were no disadvantages in employing school leavers.

Employers clearly indicated their views on the role of the school in the preparation of students for employment. When asked 'To what extent do schools give adequate attention to the preparation of students for employment?', 59 percent answered 'too little'.

There were two main areas in which employers desired changes. The first was for greater emphasis to be placed on teaching the basic skills of literacy and numeracy, particularly verbal skills.

The second was a desire for more job-oriented content in the curriculum, including the need for a greater awareness of both students and teachers of the world of work outside school and more realistic expectations regarding employment. Employers wanted the schools to encourage the development of a more positive attitude to work, emphasizing discipline, responsibility, courtesy and effort. Improved vocational guidance with the desirability of early awareness and planning for careers was also mentioned.

Inevitably, the study presents a one-sided view of the effectiveness of schools in preparing young people for the work-force. It is nevertheless an important viewpoint and one which has not been subject to research in the past. However, it is equally important to draw attention to the many initiatives within Western Australia for improving standards of literacy and numeracy and in assisting students in the transition from school to work. The following sections briefly describe these initiatives.

3. CURRENT ARRANGEMENTS AND INITIATIVES

3.1 Educating for literacy and numeracy

Clearly, developing competence in language and number are essential aims of schooling, especially at the primary school level. While a variation in standards is inevitable, the Education Department expects that, by the end of the compulsory period of primary and secondary education, all students, except a small percentage of educationally handicapped children, will be literate and numerate. That is, all students will have acquired the skills and concepts which enable them to function effectively in their group and community and will have sufficient competence in reading, writing and mathematics to make it possible for them to continue to use these abilities to further their own and the community's development. These expectations have been made explicit in various statements of Policy from the Director-General's Office, particularly Numbers 5, 6, 19 and 20.

In the majority of cases, these goals are realized as the result of educational programmes maintained by regular classroom teachers. The Education Department has initiated a number of undertakings aimed at improving the quality of such programmes with respect to developing competence in language and number. The more important of these are described in sections 3.1.1 to 3.1.3.

There are, however, some children who, for various reasons, are unable to benefit fully from the educational programmes in regular classroom. For these children, a variety of provision is made, ranging from additional help from

learning assistance teachers and support teachers in normal classrooms, through attendance at regional reading clinics and district remedial centres, to placement in special classes in ordinary schools or in special schools. Some of these arrangements are further described in sections 3.1.4 and 3.1.5.

3.1.1 Curriculum and syllabus support

The Education Department accepts as a central responsibility the provision of syllabuses in language development and mathematics. The development of such syllabuses involves careful planning over several years and draws upon the expertise of tertiary educators, teachers and community and industry representatives, as well as upon the current literature, both national and international. The syllabuses suggest a sequencing of concepts and skills and a grade placement of topics, thereby providing a basis from which schools can develop effective educational programmes.

The Education Department supports curriculum development in a number of ways. One mode of support is through the provision of extensive curriculum advisory services. Approximately 150 teachers are currently employed full-time on curriculum advisory work. Of these, approximately one-third are centrally based and the remaining two-thirds are attached to regional education centres throughout the State.

In the lower secondary school (Years 8-10), all students study English, mathematics, science and social studies. More than one-half of their school time is devoted to these subjects. Achievement in these core subjects is moderated across all schools by the Board of Secondary Education using State-wide comparability tests and school visits by subject moderators. Thus, an ongoing check on standards in these core subjects is maintained.

As part of its curriculum and syllabus support, the Education Department is planning substantial longitudinal studies of the implementation of major syllabuses. By so doing, the Department expects to shape the implementation in ways which properly reflect the intentions of the syllabuses.

3.1.2 Computer education

In view of their increasingly important role in society, the Education Department believes that an essential component of numeracy is some basic awareness of and experience with computers. Accordingly, the Department has instituted action to bring learning experiences involving computers to all pupils in high schools. A computer education programme has been implemented which gives pupils the opportunity to write their own simple BASIC language programs and to see more complex programs in operation. Usually these more complex programs are used to support the teaching of subjects such as business studies, social studies, science and mathematics.

All new secondary schools are provided with computing equipment as part of their initial establishment costs, and existing schools are assisted in acquiring equipment by a dollar-for-dollar subsidy. Currently, over half of the Government high schools in Western Australia have their own on-site computing facilities. Schools without equipment are catered for by a batch-processing facility and the opportunity to borrow one of three portable micro-computers.

Computer education is a comparatively recent innovation in Western Australia and much remains to be done. Problems demanding attention include those of teacher education, the development of improved software and funding for the necessary computer hardware.

3.1.3 Media studies

Literacy involves the ability to discriminate, comprehend, interpret and communicate, using a particular language or symbol system. Project 'Primedia' (media studies at the primary level) is an approach to developing an understanding of the modern mass media and their messages, using the language and symbol systems pertinent to these media. The course aims to enhance critical thinking and language, which are integral to any literacy programme, and to develop awareness and skills in communication, through active participation in the process of modern communication.

'Primedia' started in 1978 and presently operates in 17 primary schools (16 in the metropolitan area and one in the country). Because the course is designed to extend from Years 1-7, generally at least three teachers in each school are involved, one at lower primary, one at middle primary and one at upper primary level. The on-going in-service of these teachers enables them to act as resource persons in this area in their schools. The course is supported by a mobile resource caravan equipped to provide 'hands on' experiences for students and for teachers.

3.1.4 Learning assistance teachers

In describing provision for children with learning difficulties, reference was made in section (a) to learning assistance teachers. The Learning Assistance Teacher Scheme was initiated in 1976 to permit more children to cope with programmes in regular situations. It is anticipated that the programme will result in diminished withdrawal of children from their home room, class teacher and peers, more effective monitoring of pupil performance, and improved diagnosis and remediation of learning problems.

Selected primary-school personnel attend a one-term course of intensive study and practical experience, the objectives of which include:

(1) An understanding of the nature of disabilities and how they interfere with learning.

(2) The ability to observe, measure and evaluate the individual, to diagnose learning problems and to design appropriate instructional programmes for the immediate and long-range needs of the child.

So far, seven metropolitan and two rural courses have been organized, involving some 220 teachers, of whom 147 have been deputy principals. Further courses are planned for 1980.

3.1.5 Project TRAIL

Project TRAIL (Teacher Role in the Advancement of Initial Literacy) is a research and development project involving nine primary schools, 30 teachers and 1 000 children in grades Pre-primary to Year 3.

The research aspect is concerned chiefly with identifying patterns of child development in relation to the acquisition of literacy skills. Much previous research has accumulated correlational data in an attempt to provide for children who are 'at risk', but such research does not by itself provide profiles of individual children. The present research is intended to contribute to the correlational information and also to document the characteristics of children who are experiencing various degrees of success or failure in their attempts to read and write.

The development aspect links up with the research in that teachers are assisted to develop their ability to observe, record and analyse characteristics which may be relevant to the learning patterns of individual children. In addition, teachers participate in workshops in which they examine teaching methods and evaluate, adapt and create resources for developing all aspects of literacy. A particular emphasis in the workshops and in the intervening visits to schools by project staff, is the development of teachers' confidence in themselves as managers of the learning process, able to diagnose a child's needs and select or create the appropriate learning experience.

3.2 Orientation towards the world of work

Rather than adopting a narrow focus upon training for particular occupations, the Education Department's policy is to facilitate the student's transition to the post-secondary setting generally, of which the world of work is only one, although an important, facet. Further, the Department sees interaction between the schools and their immediate community as an essential prerequisite of any successful transition programme.

In recent years, much effort has been devoted to improving communication channels between schools and community groups, especially the employer community. Such groups are more than just a resource, providing experiences to students in schools that will assist them in the post-school transition process:

they also constitute an important reference group in monitoring the effectiveness of schools.

As an example of this closer co-operation with the community, the Mathematics Curriculum Committee of the Education Department recently asked the Confederation of Western Australian Industry for assistance in obtaining employers' views on the effectiveness or otherwise of the existing mathematics programme used in high schools. This request was made in the context of a review of the high school mathematics syllabus, in which all sections of the community were consulted. As a result, the Confederation conducted a survey of employer opinion (Attachment 6) and has forwarded its report to the Director-General of Education.

Much has yet to be done in the area of school-community interaction. As already mentioned, there still exists a considerable communication gap between the schools on the one hand and parents, employers and other groups on the other. The Department is, therefore, anxious that current efforts aimed at promoting more effective dialogue and interchange between schools and the community be maintained.

Within the broad area of transition education, a number of initiatives specifically directed at the school-work interface are worthy of mention. During 1978, the Education Department published and distributed to all secondary schools a booklet entitled And So To Work (Attachment 7), aimed at Year 10 school-leavers of low to average academic achievement, and a discussion paper, Schools and Work (Attachment 8). In addition, a careers-education course for use in Year 9

social studies classes entitled What About Me? has been prepared. Course materials consist of a students' workbook (Attachment 9) and a package of support materials, including a teachers' guide (Attachment 10), a tape and slide set and a simulation game.

Within Western Australia, the transition from school to work is assisted in a number of ways. A brief résumé of the more important of these follows:

3.2.1 The contribution of approved courses of study

In a very real sense, all subjects studied in the high-school curriculum have a role to play in the school's total careers-education programme. For example, the social studies course contains materials which give students a broad perspective of the world of work (Attachment 11). In their English lessons, students will have had the opportunity of developing skills in writing letters applying for advertised vacancies.

However, certain subjects have a more clearly defined careers orientation. Over the last few years, the Board of Secondary Education has approved a large number of optional subjects which include a distinct careers component. The following is a list of such subjects available as options to students in Years 8-10. Next to each subject is indicated in brackets the number of units available in that subject out of a maximum of 6. A unit corresponds to a teaching-time allocation of eighty minutes per week (usually two periods) for a whole school year or its equivalent.

Agriculture (3)
Animal Husbandry (3)
Arts/Crafts Vocational (2)
Audio Visual Techn. (1)
Basic Metalwork (2)
Basic Woodwork (1)
Business Prin. & Prac. (4)
Cadets Army (3)
Cadets Navy (2)
Catering (1)
Clothing & Fabrics (3)
Commerce (6)
Computer Studies (3)
Cropping (1)
Crop Production (1)
Draughting (2)
Electricity (2)
Electronics (6)
Elementary Dressmaking (1)
Farm Handyman (2)
Farm Transport (2)
Farm Workshop (2)
Farming (4)
General Metals (2)
Horticulture (2)
Hostessing (1)
Introd. Key Punch Operation (1)
Introductory Upholstery (1)
Industrial Arts (6)
Mechanics (2)
Metalwork (6)
Metalwork Applied (2)
Motor Mechanics (3)
Plastics (3)
Radio (5)
Retail Trade (1)
Shorthand (4)
Technical Drawing (6)
Transport (2)
Typewriting (6)
Welding (2)
Woodwork (6)
Woodwork Applied (3)
Woolclassing (3)
Workshop Techniques (1)

At the Year 11 and 12 level, most students study subjects which are examined by the Tertiary Admissions Examination (TAE). These subjects are largely academically biased, though some have a careers orientation. In addition, the BSE has approved a number of Certificate of Secondary Education courses which also have a more obvious careers component and which are not examined by the TAE. The subjects are listed below. Those marked with an asterisk are not examined as part of the TAE.

Accountancy
Agricultural Science
Agricultural Studies *
Animal Husbandry *
Applied Technology
Commercial Law *
Crops and Pastures *
Farm Constructions *
Farm Economics and Management *
Farm Practice *
Furniture Woodwork*
General Business Studies *
Law *
Motors and Machines *
Stenography *
Technical Drawing
Typewriting and Business Communications*

Of course, not all of the above-mentioned subjects are made available at all high schools. The courses actually offered will depend upon a variety of factors

such as the availability of teaching and other resources, student interest and local relevance. However, the Education Department has appointed superintendents of education with special responsibilities for agriculture, business education, home economics and manual arts, and most students have the opportunity to take subjects in each of these areas.

A further point which needs to be made in relation to the above subjects is that none are intended solely, or even mainly, as vocational preparation. In most cases the aim is that these subjects will contribute as much to the student's general education as to his or her careers education. However, for students in Year 11, more specific vocational preparation is available through the one-year Vocational Business Studies Course and through 'alternative courses'. These are described in sections 3.2.2 and 3.2.3 below.

3.2.2 One-year Vocational Business Studies Course (VBS)

This course is operated and certificated by the Education Department rather than by the Board of Secondary Education and is an attempt to meet a consistent and substantial demand for a specific set of vocational skills. It includes training in shorthand, typewriting (speed, production and audio), bookkeeping, office practice (including business machines), business mathematics and business English.

Although no definite figures are available, feedback from schools and employers would indicate that in recent years employers have given preference to graduates from

the Vocational Business Studies course. In particular, personal development skills, job interview techniques and the production of Work Employment Files (samples of course work), which are a feature of the VBS course, have contributed to students from this course being successful at the interview stage. It should be noted, however, that in some cases, the first position obtained did not use the skills in which the student had been trained. Over the last two years an integrated work-experience programme has been developed as part of the VBS course to assist in the transition from school to work. As a consequence of this arrangement, a large number of VBS graduates have obtained employment where they had their work experience.

3.2.3 Alternative courses

In response to the growing numbers of students entering Year 11 who have little enthusiasm or aptitude for mainstream academic courses, and whose needs are not catered for by BSE/TAE courses, individual schools in Western Australia have begun to offer their own alternative courses, which are certified entirely within the school. In 1979, some 40 schools were offering an alternative course.

While there is considerable diversity in the approaches being employed by different schools, a number of common threads are evident in the programme. Included among these are the following:

(1) Provision for continued general education, with the opportunity for remediation and upgrading

of Year 10 Achievement Certificate levels in the core subject areas.

(ii) Provision for vocationally-oriented experiences, such as work experience and the provision of more vocational options than are available in the TAE stream.

(iii) Provision for more explicit attention to personal growth and pastoral care.

In the report of a follow-up survey of 1977 alternative-course students conducted in 1978, the following conclusion was made;

> ...many students involved in alternative programmes appreciated a strong emphasis on pre-vocational skills. Students' expectations of 'getting a suitable job' were raised and some of them believed they had gained significant job-seeking skills.

Further information regarding the alternative-course programme in Year 11 is provided in Attachment 12.

3.2.4 Vocational guidance

All metropolitan and some country high schools have at least part-time Guidance Branch staff available for career information and vocational counselling of students. However, vocational guidance is not the only duty of guidance officers and thus its extent varies from school to school. As well as counselling, it includes the provision of information through pamphlets/booklets, tapes, films, library material, guest speakers and industrial visits. 'Careersnights' are sometimes

arranged with the sponsorship of service groups, such as Apex or Rotary and work experience is arranged in many schools in co-operation with youth education officers, also employed within the schools.

More remote or smaller country high schools may not have access to these provisions. However, 51 such schools have careers advisers who are teachers released for six to eight periods per week for career counselling in their schools.

During 1980, the Education Department is likely to begin work on a computer-based careers information system. The system would be an adaptation of the Student Guidance Information System developed in the Canadian Province of Ontario.

3.2.5 Work experience

Prior to 1969, few attempts were made to organize work experience in Western Australian Government schools. From 1969 onwards, following the introduction of the youth education officer scheme in senior high schools, work experience received much greater attention, with these full-time officers available to devote a significant part of their time to promoting the programme and establishing the essential community contacts.

In 1976, the Education Department formed a committee, with employer and Union representation, to establish acceptable ground rules for the operation of the work-experience scheme in Departmental schools. A set of agreed guidelines regarding such matters as payment and insurance was produced and these, along with other

suggestions, were incorporated into a handbook entitled Work Experience Programmes, which was published in 1977 for teachers developing the scheme in schools (Attachment 13).

The scheme has grown rapidly and in 1979 will have involved some 6 000 students, including approximately 30 students from each of the Department's special schools for physically and mentally handicapped children. Most senior high schools in Western Australia have on their staff a youth education officer whose major duties include the management of the work-experience programme. Where no youth education officer is appointed, as in smaller country secondary schools, the scheme is organized by a member of the general teaching staff. Further expansion of the scheme is likely to be more rapid than in the past, though there is a need for more effective publicity and public education about the scheme, and for the State and Commonwealth Governments to take a more active role as employers.

During 1979, a major research project was initiated by the Research Branch of the Education Department into work experience-programmes in Western Australian high schools. The aim of the study is to review current literature and thinking on the subject, to describe the programmes currently in operation, to identify and analyse factors presently acting as constraints on the effectiveness and scope of work experience, and to make recommendations on future policies for, and operation of, work-experience programmes. The study involves a survey

of all Government high schools in Western Australia, case studies of selected schools and consultations with employer groups.

3.3 Technical Education

In Western Australia, TAFE facilities are administered by the Technical Education Division of the Education Department. The majority of courses offered are vocationally oriented, having been designed and developed in consultation with representatives from commerce and industry to meet the specific requirements of various vocations.

In 1978 approximately 97 000 individual students (not full-time equivalents) were enrolled in TAFE courses, of which about 4 000 came directly from Year 10 of secondary schooling, with about 800 of these entering full-time vocational courses.

For this submission, those activities of the Technical Education Directorate devoted to assisting in the transition of youth from school to work or further education will be highlighted. In particular, bridging or preparatory programmes, link courses and foundation for employment courses will be briefly discussed.

3.3.1 Bridging or preparatory programmes

In order to ensure that specific groups do not encounter unnecessary barriers to entry into vocational courses, bridging or preparatory programmes have been developed. Programmes in Mathematics and English have been designed on a modular basis which allow students to progress at a rate commensurate to their ability. In addition, a 'volunteer tutor' scheme has been organized which enables students who have marked literacy problems

to have one-to-one tuition with volunteer tutors.

3.3.2 Link courses

Discussions between technical and secondary staff have been progressing with a view to developing link courses for students in the final years of secondary education, concentrating mainly at the Year 10 level. These courses would aim to introduce secondary students to a variety of vocations, thus better equipping them to make correct educational choices in terms of their own aspirations. The duration of the courses would be variable, but probably of the order of a half-day each week for a term or more, depending on the number of vocations treated. Pilot courses have operated this year and it is anticipated that there will be increased participation in these types of courses in 1980 and in future years.

3.3.3 Foundation for employment courses

Investigations are currently being undertaken to determine whether there is a need to develop foundation for employment courses similar to those operating in the United Kingdom. These courses consist of a one-year full-time programme designed to meet the pre-employment needs of students, or to serve as a preparation for subsequent educational programmes for young people who have completed the tenth year of schooling. Each course is based on a study of related groups of occupational and industrial activities, together with appropriate periods of work experience. Time is also devoted to continuing the general and personal education of the student. It is anticipated that courses will be piloted at two technical colleges in 1980.

4. IMPROVING THE EFFECTIVENESS OF SCHOOLS

4.1 The Education Department's view on the effectiveness of schools

In considering the effectiveness of Western Australian Government schools in preparing young people for the work-force, with particular emphasis on literacy and numeracy, three kinds of evidence have been discussed, namely, achievement data, opinions of employers, and new and on-going local arrangements and initiatives in the areas of language and number and transition to work.

The Education Department considers that schools have, in the main, responded quickly and responsibly to public demands for a greater emphasis on literacy and numeracy and vocational preparation. In addition, Departmental initiatives have reflected an acceptance of the need for greater attention to these areas, tempered with an awareness of the dangers implicit in the restrictive view of education and schooling espoused by many who have called for a more exclusive emphasis on basic skills and on preparation for the work-force.

Of course, the effects of many of the more recent initiatives taken by schools and the Department are unlikely to be immediately apparent. However, in the longer term, it is confidently expected that the cumulative effects of concerted attempts to improve literacy and numeracy and to facilitate the students' transition to the post-school setting will be clearly evident.

This does not mean that the Education Department is satisfied with the current situation. While the Department would certainly want to reject the claims of those who argue that educational standards have declined and that schools are obsessed with the pursuit of academic learning, it does accept

that schools could be more effective and will, in any case, have to be increasingly more adaptive in meeting the demands of a rapidly changing society.

4.2 Evaluation and implementation of new ideas

One way in which improvement can occur is through the careful evaluation of new ideas and initatives, the re-evaluation of established practices and the dissemination, and general adoption of those practices adjudged to be worthy of wider application. In this regard, the Education Department has arranged for studies to be carried out to evaluate a number of ongoing local initiatives, such as the new mathematics syllabus, the work-experience programme, the Learning Assistance Teachers Scheme and alternative courses for Year 11 students. A subsequent stage is to publicize successful projects, to organize for teacher development and to establish the support and organizational structures necessary for system-wide implementation of these concepts.

While this process has often occurred in the past, there have also been notable instances of failure to evaluate new ideas properly, failure to take seriously the problem of disseminating new ideas and failure to set up appropriate structures within the Department so that new ideas can receive the level of support necessary for them to become internalized by the system. This may well be indicative of a need for more effective planning on a systematic basis by full-time planners, rather than by those responsible for individual initiatives.

4:3 Curriculum development

Another way in which improvements can occur is through the process of curriculum development. In particular, the

present debate regarding the effectiveness of schools in the areas of literacy and numeracy and of preparation for work has pointed to a need for continuing dialogue on defining the role of these areas in terms of the total school curriculum.

Two questions would seem to be at issue here. The first concerns the extent to which literacy and numeracy and careers education can be integrated into the curriculum generally, as opposed to being the major responsibility of specialist teachers and of specific subject areas. This is largely a 'technical' matter and is a question for the educators, especially the curriculum developers, to answer.

The second question concerns the value in terms of time, emphasis, and so on, to be placed on these areas vis-á-vis other areas. No doubt schools could quickly cause scores on standardized achievement tests to rise several points by devoting much more time to subjects such as reading, written expression and mathematics. Similarly, they could radically increase students' awareness and realistic assessment of the range and nature of career opportunities open to them by the simple expedient of dramatically increasing the time commitment to such learnings. The problem is that this must inevitably occur at the expense of other areas of the curriculum.

As mentioned earlier, schools are being called upon to accept responsibility for a wider range of objectives than ever before. It is therefore relevant to inquire as to how many 'extras' the curriculum can absorb before an unacceptable decline occurs in other areas and what priorities should be given to different aims. While certain factual information may be useful in resolving this issue, ultimately it is a matter of values

and of what one considers to be the purposes of schools. Furthermore, it is a question which educators cannot answer without reference to the wider community. Indeed, interaction between educators and the community at large is essential in order to maintain balance and relevance in the curriculum.

With regard to the above issues, the Education Department perceives a need for research at the primary school level into the extent to which different groups (administrators, teachers, pupils, parents and employers) place different values on the importance of literacy and numeracy in the context of the total primary school curriculum. One obvious indicator of the importance attached to these areas is the amount of time spent on them. At the high school level, the time allocated to English and mathematics and to the other 'core' subjects, science and social studies, is fixed to be the same for all students. At the primary school level, however, no such stipulations apply and thus there exists considerable latitude for teachers and schools to vary the amount of time devoted to language and number. In order to promote more informed discussion on the place of literacy and numeracy in the primary school curriculum, the Education Department regards it as important to obtain some base-line information regarding the amount of variation that presently exists between schools, age-grades and teachers in the time devoted to developing competence in literacy and numeracy. In addition to the time allocation information, it would seem equally important to know the opinions of various groups regarding the relative importance of language and number in the primary school curriculum. With a view to obtaining this information the Education Department is currently considering the possibility

of conducting a survey among schools during 1980.

Another area of the curriculum where it would seem useful to have research information is in the area of educational provision for less-able and under-achieving 14-to 15-year-old students. Within Western Australia, there is some evidence to suggest that, since the introduction of the Achievement Certificate and partly as a consequence of a growing trend towards mixed grouping practices, relatively little attention has been given to considering the appropriateness and effectiveness of educational provision for low ability and under-achieving students in their final year of compulsory schooling. At this stage, the Education Department is unsure as to exactly which questions need to be answered or the kind of study which could most usefully be undertaken. Further work will be carried out with a view to clarifying the problem and formulating appropriate questions and strategies.

4.4 Supervision, monitoring and reporting of pupil progress

A further way in which schools can become more effective is through better supervision at all levels and through improved procedures for monitoring and reporting of pupil progress. Traditionally, supervision in Western Australia, as elsewhere, has tended to be associated with the superintendent and, indeed, superintendents continue to have an important, if changed, role to play in this area. In 1978, the superintendency was increased by the creation of a significant number of new positions. In keeping with a more professional view of teachers, the Education Department has, over the last decade, fostered the advisory and leadership roles of superintendents and reduced the importance of their formerly important inspection and assessment functions.

In addition, a policy of devolution of supervisory

responsibility to the regions and to the schools has been pursued. The Education Department believes that supervision is something to be carried out at all levels by people who have close and frequent contact with those being supervised. The successful implementation of this policy requires continuing attention to the clarification of responsibilities and to ways of promoting co-ordination and sensitive management of the supervisory practices of the Department, the regions and the schools. One of the ways in which the Education Department has attempted to foster improved supervision has been through the initiation of a variety of experimental approaches to school evaluation. As a result, valuable experience in this area has been acquired and has been made generally available to schools through principals' conferences, meetings of superintendents and the like.

Related to the question of supervision is the effective monitoring and reporting of pupil progress. Mention has been made of Departmental initiatives in this area (including the Learning Assistance Teachers Scheme and Project TRAIL) and of the need for more valid assessment instruments for both formative purposes and summatively in monitoring standards over time. The Education Department has been active in preliminary discussions regarding a co-operative venture, involving the Australian Council for Educational Research and various State education departments, which would have as its primary purpose the development of such testing materials.

In the area of reporting, a two-stage review of the system of reporting used in primary schools was begun early in 1979. Initially, regional directors and superintendents were asked to establish regional committees to collate suggestions and comments

about the nature and form of reporting that should occur in primary schools. Subsequently, a central Departmental committee was convened to review the responses from the regional committees and to determine the future direction that primary school reporting should take.

It is evident that there is also room for improved reporting procedures at the secondary level. In the survey of attitudes of employers towards school leavers in Western Australia (Attachment 1) it was found that the majority of employers accepted the current assessment system, but that over a quarter saw a need for changes in the system of assessment and reporting. Some of the recommended changes were

- The provision in school reports of more details of personal qualities other than academic performance.
- Standardization of assessment among schools.
- Better explanation of current methods of assessment and reporting.

4.5 Teacher education

In terms of improving the effectiveness of schools, another important area in which the Education Department perceives a need for further attention is in the area of teacher education. In particular, it is felt that there should be better co-ordination and communication between the teacher education institutions and the Education Department. This view has been presented and detailed in a recent submission from the Education Department to the National and State Committees of Inquiry into Teacher Education (Attachment 14) and will not be elaborated here. However, it is pertinent to draw attention to certain recommendations contained in the submission which

relate to pre-service teacher education and the teaching of literacy and numeracy. The Education Department recommended that

1 A review should be made of the relative time allocations in teacher-preparation courses between personal development studies, pedagogical studies and school experience, and recommendations made as to the most appropriate proportions for pre-primary, primary and secondary teacher education.

2 A review should be made of the time allocation, in both primary and secondary teacher preparation, to the teaching of communication and mathematics skills, with a view to establishing a reasonable mandatory requirement.

3 Diagnosis and remediation in communication and mathematics skills should be presented as an accepted aspect of normal teaching.

4 Students in pre-service teacher-education courses should be tested for proficiency in communication and mathematics skills. Remedial programmes exemplifying diagnostic and remediation should be provided for those who fail to reach a reasonable standard. Attainment of proficiency should be a prerequisite for graduation.

4.6 Conclusions

In identifying ways of improving the effectiveness of schools in preparing young people for the work-force and, in particular, in ensuring that they have competence in the areas of language and number, four foci for further action have been discussed. These have been (i) the evaluation, dissemination and systematization of new ideas and initiatives; (ii) continuing dialogue on the role of literacy and numeracy and of career

education in the curriculum; (iii) improved supervision, monitoring and reporting of pupil learning; and (iv) greater attention to the education of teachers, especially their preparation for teaching literacy and numeracy.

It should be evident from the above discussion that the Education Department does not believe that there are any quick and simple ways of improving the effectiveness of schools. Rather, it believes that long-term gains are likely to be achieved as the result of persistent efforts on a fairly broad front, and in a direction which has the general endorsement and support of a wide spectrum of community interests.

In making this submission to the Senate Standing Committee, the Education Department has welcomed the opportunity to address an improtant contemporary issue, to present its thinking on the subject and to describe current and forthcoming initiatives in the area. Officers of this Department would be most willing to discuss further matters raised by the submission with the Committee.